REMARKS

Reconsideration and further examination is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1-12 and 14-38 were rejected under 35 U.S.C. §102(e) as being anticipated by Weldon et al. (hereinafter Weldon) (US 6,366,563 B1).

Weldon:

Weldon is directed to a method of collecting service level agreement statistics in a communications network. As described in the Abstract of Weldon:

"...A probing router is used at a source site of a virtual private network. In-band probing operations are performed by components within the probing router, using processing resources available from a router engine portion of the probing router. In this way, changes in the network and service level agreement statistic collection processes may be quickly and easily accommodated within the probing router. Furthermore, the probing router communicates the probe message through an in-band communication channel so as to provide a direct measurement of service level data for the channel used for communicating information between the source site and a destination site..."

Weldon contrasts his invention with the prior art, which includes both a source probe and a source router, each of which have different IP addresses. In the prior art, the source probe sent the probe message through the source router into the network. Weldon invention essentially integrates the source probe capability into the source router. As described in column 4, lines 8-14 of Weldon:

"...In this way, the probing operation is performed in software (although hardware/firmware/software combinations are alternatives as well) so that changes in the core network and SLA statistic collection processes may be quickly and easily accomplished. Furthermore, the probing router sends the probe message through the same path as the data, thus providing a direct measurement of SLA data..."

The probing performed by Weldon is done to determine an availability of the destination node. Thus Weldon describes:

"...The probe message is formed and sent from the source probe 1 at a predetermined time and a time stamp of the send time is included in the probe message. Once the probe message is passed through the network 17 and by the destination router 13 to the destination probe 3, the destination probe 3 recognizes that the probe message has been received. The destination probe 3 then sends a reply probe message to the source probe 1, and includes information in the reply probe message regarding the time that the destination probe 3 took between receiving the probe message and transmitting the reply probe message. Thus, the reply probe message includes the time stamp inserted by the source probe 1 and the remote latency caused by the destination probe 3. In this way, when the source probe 1 receives the reply probe message it is possible to determine the round trip time between when the source probe 1 originally sent the probe message and the time that the reply probe message was received by the source probe 1, less the remote latency time. ....Availability is one of the SLA statistics that is collected by way of the probing process. Because availability relates to a measurement that is taken over a period of time (or over a number of discrete events), the source probe 1 is configured to set a polling interval at 2.5 minutes so as to provide two measurements for a 5 minute window, and therefore provide a 5 minute resolution with regard to the availability statistic...."

Weldon describes a VPN operations center (VPNOC 221). The VPNOC performs a variety of functions for controlling the probing routers. For example, as described at column 5, 'a VPN operations center 221 (VPNOC) ... downloads a control instruction to the source VPN probing router 27..." As described at column 6, lines 18-21, "the parameters of the probing operation are software settable, and may be remotely adjusted by the VPNOC..." As described at column 6, lines 54- 56 "... The VPNOC 221 hosts the QVPN builder, which is a software based mechanism used to configure the VPN topology, set security profiles and distribute keys to each VPN site in an automatic fashion..." Thus, although the probing routers issue the probes, the control of the network configuration is centralized at the VPNOC.

The Examiner states, at page 3 of the office action that Weldon teaches "optical service logic, coupled to the UNI and the peer-to-peer interface, for managing the optical communication network in accordance with said SLA for the user (col. 6, lines 29-53 and col. 5 lines 5-37).

Weldon describes, at column 6, lines 29-53:

"...the inventive system helps to achieve a goal of isolating the functions performed in the network 217 from those performed at the source site or the destination site. Consequently, the operator of the network 217 may upgrade the network independent of whether any changes are made at the source site or the destination site. The isolation of the functionality performed by the network 217 and that performed by a source equipment or destination equipment is accomplished by isolating "core" communication transport functions performed in the network 217 from node-specific operations performed at different nodes connected to the network, such as at the source site. *In this way, the network 217 may be upgraded separate from the equipment at the source site or the destination site. Once the core network is changed, any reprogramming of the VPN probing routers is accomplished by configuration commands sent from the QVPN builder....*" (Emphasis added by Applicant)

In contrast, claim 1 of the present invention recites: "...An optical service agent operating at an optical switched router for managing a service level agreement (SLA) for a user in an optical communication network, the optical service agent comprising ... a user-to-network interface (UNI) for interfacing the user at the optical switched router with the optical communication network ... authentication logic for controlling access by the user to the UNI; a peer-to-peer interface *... and optical service logic at the optical switched router, coupled to the UNI and the peer-to-peer interface, for managing connections in the optical communication network in accordance with said SLA for the user....*"

In order to support a rejection under 35 U.S.C. §102(e) every limitation of the claims should be shown or suggested by the art. Weldon fails to satisfy this burden for at least the following reasons.

Claims 1-11:

1. Weldon neither describes nor suggests an optical switched router

Claim 1 is directed at optical switched router. Weldon neither describes nor suggests an optical switched router. In particular, Figure 4 of Weldon illustrates several components in a probing router; but does not show or suggest optical technology. For at least this reason, the rejection under 35 U.S.C. §102 is improper and should be withdrawn.

2. Weldon neither describes nor suggests optical service logic such as that claimed

Claim 1 recites "...optical service logic at the optical switched router, coupled to the UNI and the peer-to-peer interface, for managing connections in the optical communication network in accordance with said SLA for the user..." No such structure is shown or suggested by Weldon. Rather, Weldon describes a VPNOC which is a centralized controller that manages connections in the network. Such a structure is fundamentally different than that of claim 1. In fact, Weldon explicitly states an advantage of his system of "... Any reprogramming ... is accomplished by configuration commands sent from the QVPN builder..."Applicants would respectfully submit that such language teaches away from the claims of the present invention.

Accordingly, for at least the reason that Weldon fails to describe or suggest several limitations of claim 1, the claims are patentably distinct over Weldon, and it is requested that the rejection be withdrawn. Dependent claims 1-11 server to further limit claim 1 and are therefore allowable for at least the same reasons as claim 1.

Claims 12 and 13-23:

Applicants' claim 12 recites "...An optical switched router comprising ... a user application requiring a communication service from an optical communication network, the communication service having an associated service level agreement (SLA) , authentication logic

for controlling access by the user application to the communication services of the optical communication network; and an optical service agent operating the an optical switched router for managing the optical communication network to provide the service at the associated service level agreement (SLA) to the user application, wherein the optical service agent comprises a user-to-network interface (UNI) for interfacing with the optical communication network; a peer-to-peer interface for interfacing with peer users; and optical service logic for interacting with the optical communication network via the UNI and with the peer users via the peer-to-peer interface *for managing connection in the optical communication network to support* said SLA for the user application..." Accordingly, as in claim 1, claim 12 is directed towards an optical switched router, wherein the router includes service logic for managing connections. As described above with regard to claim 1, such limitations are neither shown nor suggested by Weldon. For at least this reason it is requested that the rejection under 35 U.S.C. §102 of claim 12 be withdrawn. Dependent claims 14-23 serve to further limit claim 12 and are thus allowable with claim 12.

Claims 24- 34:

Applicants' claim 24 recites "...A system comprising ... an optical communication network comprising *a plurality of optical switched routers*, wherein each optical switched router includes an optical service agent including a user-to-network interface (UNI) for interfacing with the optical communication network and a peer-to-peer interface for interfacing with peer optical switched routers ... a first network user coupled to the optical communication network via the user-to-network interface (UNI) of an optical switched router for *obtaining optical communication services from the optical communication network* in response the input from the first network user at a user-to-network interface (UNI) and for *managing a service level*

agreement (SLA) for the first network user by controlling connections in the optical communications network and ...authentication logic for authenticating requests from the first network user for managing the service level agreement (SLA)...." As described above with regard to claim 1, such limitations are neither shown nor suggested by Weldon. For at least this reason it is requested that the rejection under 35 U.S.C. §102 of claim 24 be withdrawn. Dependent claims 25-34 serve to further limit claim 24 and are thus allowable with claim 24.

Claims 35-38:

Claim 35 is directed towards "...A method for managing service level agreements in an optical communication system at an optical switched router, ..." Such a system is fundamentally different than that of Weldon, which uses a centralized VPNOC for managing service level agreements, rather than performing them at optical switched routers. For at least this reason, claim 35 and its dependent claims 36-38 are patentably distinct from Weldon, and the rejection should be withdrawn.

Conclusion:

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone the undersigned, Applicants' Attorney at 978-264-6664 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

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